

GB 0003920  
JAN 1815

B 181501



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heat above 212°

A.D. 1815 . . . . . N° 3920.

vessel jacketed  
to bottom

Brewing Malt Liquors.

426/16

## KILBY'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN KILBY, of the City of York, Brewer, send greeting.

WHEREAS His present Majesty King George the Third, by His Letters Patent under the Great Seal of Great Britain bearing date at Westminster, 5 the First day of June now last past, did give and grant unto me, the said John Kilby, His especial licence, full power, sole privilege and authority, that I, the said John Kilby, my executors, administrators, and assigns, and such others as I, the said John Kilby, my executors, administrators, or assigns, should at any time agree with, and no others, from time to time and at all 10 times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, my Invention of "AN IMPROVEMENT OR IMPROVEMENTS IN THE ART OF BREWING MALT LIQUORS;" in which said Letters Patent there is contained a proviso obliging me, the said John Kilby, by an instrument in 15 writing under my hand and seal, particularly to describe and ascertain the nature of my said Invention, and in what manner the same is to be performed, by an instrument under my hand and seal, and to cause the same to be inrolled in His said Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said recited Letters 20 Patent, as in and by the said recited Letters Patent, reference being thereto had, will more fully appear.



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*Kilby's Improvements in the Art of Brewing Malt Liquors.*

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NOW KNOW YE, that in compliance with the said proviso, I, the said John Kilby, do hereby declare that the nature of my said Invention, and the manner in which the same is to be performed, are described as follows, that is to say:—

In the common way of boiling the wort, there is frequently, if not always, 5 produced by the action of the fire upon the brewing copper or vessel, a greater or less degree of burning of the extract, and this I prevent by never suffering either fire or flame to come in contact with the vessel in which the wort is boiled, but effecting the boiling of the wort by means of steam applied to the outside of the vessel in which the wort is contained. For this purpose I inclose 10 my brewing vessel in another vessel, which I call the case or jacket, made either of metal or of wood, in such a manner that a convenient space may be left between the said case or jacket and brewing vessel, for the admission of steam from a boiler, with fire under it, by means of a tube or tubes, or any convenient communication by which steam may pass from the said last- 15 mentioned boiler into the said space between the case or jacket and the brewing vessel. In arranging this simple apparatus, the following particulars should be attended to:—

1<sup>st</sup>. The brewing vessel must be so well secured in its case or jacket that there may be no way for the steam admitted between them to escape but 20 through a valve (or valves), or cock (or cocks), provided for the purpose (but I prefer the valve, because, by means of the load or weight put thereon, the escape or detention of the steam is very easily regulated).

2<sup>d</sup>. The brewing vessel should rise somewhat higher than the case or jacket, or, in other words, it is advisable not to apply the steam to the brewing vessel 25 higher than the worts within it rise to, and to prevent this it is safer to have the brewing vessel filled to such a height that the evaporation by boiling the worts may never bring the surface quite so low in the vessel as the part on which the steam acts. The reason for this precaution is this: some portions of the hop are apt to apply themselves to the side of the vessel above the worts, 30 where they remain longer or shorter, according as accident may direct; and such portions, by being exposed to a greater heat than that of the worts, might possibly be injured in their flavour, and if so, when again carried into the worts by any swell of the boiling, might affect the flavour of the beer.

3<sup>a</sup>. The boiler that supplies the steam should also be furnished with a steam 35 valve or valves.

4<sup>th</sup>. The boiler should be placed somewhat lower than the brewing vessel, in order that the water produced by the condensation of the steam, in the case



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or jacket, while the brewing vessel and its contents are having their temperature raised to the boiling point, may be returned to the boiler by means of a tube.

5<sup>th</sup>. The tube or tubes, which connect the boiler and the case or jacket, should be furnished with a cock or cocks, or valve or valves, to enable the brewer to shut off or admit the steam at pleasure.

The advantages resulting from this improved method of brewing are, the preventing entirely the possibility of any burning or setting-too of the extract to the bottom of the brewing vessel, the degree of heat applied thereto being so perfectly under controul, by means of the safety valve (or valves), that it can never exceed the degree wanted. N.B.—For dispatch, it may sometimes be convenient that the safety valve should be so loaded, that the temperature of the steam may be raised from ten to twenty degrees above  $212^{\circ}$ , that it may the more easily communicate to the brewing vessel the temperature necessary to bring its contents to the boiling point; and it is proper to remark here, that by employing a close brewing vessel, with a safety valve, the temperature of the worts also may be raised above the common boiling temperature of  $212^{\circ}$ , and a larger portion of extract be thus obtained from the hop than by the common boiling temperature. As the extract of the malt is preserved from being hurt by the fire, so the hop is also preserved from injury, which makes it give out a greater quantity of extract and a finer flavour. The flavour of the beer thus brewed is superior to that boiled in the common way, and when properly fermented is more vinious and spirituous and palatable.

Having thus described my said improvement or improvements in the art of brewing, it is only necessary farther to remark, that I do not rest my Invention on the apparatus as such, or claim the apparatus as my Invention, but only its application to the art of brewing malt liquors. In other words, my Invention consists in performing, by means of steam applied to the brewing vessel, what has hitherto been done by fire applied directly thereto.

In witness whereof, I, the said John Kilby, have hereunto set my hand and seal, the First day of December, in the year One thousand eight hundred and fifteen.

JOHN KILBY. (L.S.)

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R. STEELE.

AND BE IT REMEMBERED, that on the same First day of December, in the year above mentioned, the aforesaid John Kilby came before our Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute in 5 that case made and provided.

Inrolled the same First day of December, in the year above written.

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